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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/865,138	05/24/2001	Gary D. Ellis	IN-5468	2692

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EXAMINER

CARRILLO, BIBI SHARIDAN

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 01/29/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/865,138

Applicant(s)

ELLIS ET AL.

Examiner

Sharidan Carrillo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44 is/are pending in the application. *1-21, 23-32 BSR 1/24/03*
- 4a) Of the above claim(s) 1-32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 33-44 is/are rejected. *BSR 1/24/03*
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-44 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 05. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-21 and 23-32, drawn to a composition, classified in class 510, subclass 247.
 - II. Claims 22 and 33-44, drawn to a method of removing scale, classified in class 134, subclass 22.1.

2. The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process such as treating brass.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

3. During a telephone conversation with Ms. Sabourin on 12/6/02 a provisional election was made with traverse to prosecute the invention of Group II, claims 22 and 33-44. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-21 and 23-32 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

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Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 43 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 43 is nonenabling for the following reasons. Claim 43 recites passivating the substrate with a passivating solution comprising hydrochloric acid and sodium nitrate. The specification of the instant invention is directed to removing scale from boilers. It is well known in the art that boilers are made of ferrous metal, as described in RE30,796. Further, Uhlig teaches that chloride ions break down passivity or prevent its formation in Fe, Cr, and stainless steel. Claim 43 is nonenabling because it requires hydrochloric acid (i.e. Chloride ions) in a passivating solution for passivating substrates, wherein the substrates as taught by the instant specification includes boilers. Claim 43 is nonenabling because it is unclear how hydrochloric acid passivates substrates, which would include ferrous and stainless steel surfaces, in view of the teaching of Uhlig that chloride ions prevents passivity from occurring.

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6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 33-43 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 33 is indefinite because it fails to positively recite removing scale from the substrate surface. Claims 34, 36-41 and 43 are indefinite because of its dependency. Claim 35 is indefinite because it is unclear what is meant by "for from". Claim 45 is indefinite because it is unclear whether the passivating is done before or after the rinsing or the circulating step.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 22, 33-35 and 41-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Lesinski (RE30,796).

In reference to claims 22 and 33, Lesinski teaches removing scale from metal surfaces using a cleaning composition comprising EDTA and NaOH having a pH of 9, as described in col. 3, lines 65-68. In reference to claim 34, refer to col. 6, line 38. In reference to claim 35, refer to col. 3, lines 35-37. In reference to claim 41, refer to col. 3, lines 39-40. In reference to claim 42, refer to col. 1, lines 14, col. 3, lines 15-17.

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10. Claims 22, 33-35, and 44 are rejected under 35 U.S.C. 102(b) as being anticipated by Tate (5762821).

Tate teaches a method of removing alkaline earth metal scale deposits and silica-based scale deposits. In reference to claims 22, 33, and 44, refer to col. 2, lines 20-22, lines 55-65, and col. 3, lines 15-45. In reference to claim 34, refer to col. 5, lines 15-17. In reference to claim 35, refer to col. 5, lines 48-50.

11. Claims 22 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Bersworth et al. (3033214).

Bersworth et al. teach removing scale using EDTA and sodium hydroxide. In reference to claims 22 and 33, refer to col. 2, lines 40-55, col. 3, lines 8-10, col. 4, lines 19-20, and col. 5, lines 45-50.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 36-37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lesinski (RE 30,796).

Lesinski teaches the invention substantially as claimed with the exception of inspecting the substrate and recirculating the cleaning composition. Lesinski teaches cleaning the boiler until the surface is substantially clean. It would have been obvious and within the level of the skilled artisan to repeat the cleaning process until the surface is substantially clean. Further, one of ordinary skill in the art would be required to inspect the substrate in order to determine if the surface is substantially clean and to further evaluate if additional cleaning is required.

15. Claims 36-37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tate (5762821).

Tate teaches the invention substantially as claimed with the exception of inspecting the substrate and recirculating the cleaning composition after inspection. Tate teaches cleaning the boiler for purposes of removing and dissolving scale. It would have been obvious and within the level of the skilled artisan to repeat the cleaning process until all the scale has been removed from the boilers, heat exchangers and other industrial processing equipment. Further, one of

ordinary skill in the art would be required to inspect the substrate in order to determine if the scale has been removed or if any additional cleaning is required.

16. Claims 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable Bersworth et al. (3033214).

Bersworth et al. teach the invention substantially as claimed with the exception of inspecting the substrate. It would have been obvious and within the level of the skilled artisan to inspect the substrate to determine if the scale had been effectively removed or if any additional cleaning is required. In reference to claims 37-38 and 40, refer to Fig. 1, col. 3, lines 55-60, and col. 4, lines 12-15, which teaches recycling of the spent cleaning solution. In reference to claim 39, refer to col. 4, lines 15-20.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lesinski and Woolman teach cleaning and passivating. Paul et al. teach the removal of scale using EDTA. Busch teaches treating boilers using EDTA, a basic solution at a pH of 12. Morris et al. teach using EDTA and KOH for sulfate removal. Rootham teaches scale removal and filtration. Ellis et al. teach removal of scale from a substrate. Hayashi teaches removal of sulfate scale using EDTA and NaOH. Klos teaches passivating using nitrate and hydrochloric acid for zinc and cadmium alloys.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharidan Carrillo whose telephone number is 703-308-1876. The examiner can normally be reached on Monday-Friday, 6:00a.m-2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on 703-308-4333. The fax phone numbers for

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the organization where this application or proceeding is assigned are 703-305-7719 for regular communications and 703-305-7719 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Sharidan Carrillo
Primary Examiner
Art Unit 1746

bsc
January 24, 2003

SHARIDAN CARRILLO
PRIMARY EXAMINER
